Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (currently amended). A data input device comprising:

an impedance sensor arranged with respect to a tracking surface, said impedance sensor having a measurement zone within which said impedance sensor measures an electrical impedance; and

a controller ~~receiving and~~ responsive to the measured impedance of said impedance sensor for determining a distance of spatial separation between the data input device and the tracking surface relative to one another as a function of the measured impedance ~~if said data input device is spatially separated from said tracking surface by at least a lift-off detection distance as a function of a measured impedance~~, said controller initiating a non-tracking mode in which said controller suspends tracking of relative movement between said data input device and said tracking surface when said data input device is spatially separated from said tracking surface by at ~~least the~~ least a lift-off detection distance.

Claim 2 (currently amended). The data input device as set forth in claim 1 wherein said ~~controller is responsive to the measured impedance to detect the proximity of the data input device and the tracking surface relative to one another as a function of the measured impedance when said~~ data input device is in a tracking mode ~~to determine~~ when determining whether said data input device is spatially separated from said tracking surface by at least the lift-off detection distance.

Claim 3 (original). The data input device as set forth in claim 2 wherein said impedance sensor is shaped and sized to face said tracking surface when said data input device is in said tracking mode.

Claim 4 (original). The data input device as set forth in claim 1 further comprising a housing shaped and sized to engage said tracking surface, said impedance sensor and controller being at least partially enclosed within said housing.

Claim 5 (original). The data input device as set forth in claim 4 wherein said impedance sensor is shaped and sized to mount on a surface of the housing and shaped and sized to engage said tracking surface.

Claim 6 (original). The data input device as set forth in claim 1 wherein said impedance sensor comprises at least two electrodes.

Claim 7 (original). The data input device as set forth in claim 6 wherein said impedance sensor comprises at least four electrodes.

Claim 8 (original). The data input device as set forth in claim 7 wherein said impedance sensor comprises at least six electrodes.

Claim 9 (currently amended). The data input device as set forth in claim 6 wherein said impedance sensor is a capacitance sensor for measuring an electrical capacitance between said at least two electrodes, thereby determining ~~proximity of~~ the distance of spatial separation between the data input device and the tracking surface ~~relative~~ relative to one another as a function of the measured capacitance.

Claim 10 (original). The data input device as set forth in claim 9 wherein said at least two electrodes are arranged adjacent one another, said at least two electrodes being substantially equidistant from one another such that the at least two electrodes maintain a minimum clearance with respect to one another.

Claim 11 (original). The data input device as set forth in claim 10 wherein a first electrode comprises a substantially circular conductor and a second electrode comprises a substantially annular conductor surrounding said substantially circular conductor, said first and second

electrodes maintaining a minimum clearance between one another between an outer perimeter of the substantially circular conductor and an inner circumference of the substantially annular conductor.

Claim 12 (original). The data input device as set forth in claim 10 wherein first and second electrodes comprise substantially comb-shaped conductors having digits extending at regular intervals from an edge of each electrode, said digits of said first electrode being interdigitized with the digits of said second electrode.

Claim 13 (currently amended). The data input device as set forth in claim 9 wherein said capacitance sensor creates a fringing field capable of determining the ~~proximity of~~ distance of spatial separation between the tracking surface ~~relative to~~ and the data input device relative to one another as a function of measured changes in a dielectric constant of the tracking surface and a dielectric constant of ambient air between the data input device and the tracking surface when separated from one another.

Claim 14 (original). The data input device as set forth in claim 9 further comprising a resistance-capacitance (RC) resonance circuit shaped and sized to connect to the capacitance sensor.

Claim 15 (original). The data input device as set forth in claim 9 wherein said at least two electrodes comprise a first electrode shaped and sized to mount on said data input device and a second electrode comprising said tracking surface.

Claim 16 (currently amended). The data input device as set forth in claim 6 wherein said impedance sensor is a resistance sensor for measuring an electrical resistance between said at least two electrodes, thereby determining the distance of spatial separation between ~~proximity of~~ the data input device and the tracking surface ~~relative~~ relative to one another as a function of the measured resistance.

Claim 17 (currently amended). The data input device as set forth in claim 16 wherein said data input device passes current between said at least two electrodes, said resistance sensor

determining the distance of spatial separation between ~~proximity of~~ the tracking surface ~~relative to~~ and the data input device by measuring changes in the resistance between the at least two electrodes.

Claim 18 (original). The data input device as set forth in claim 17 wherein said current is direct current.

Claim 19 (original). The data input device as set forth in claim 16 further comprising a housing shaped and sized to engage the tracking surface, said at least two electrodes shaped and sized to mount on an outer surface of said housing.

Claim 20 (original). The data input device as set forth in claim 19 wherein said housing is formed from material having a higher resistance than the tracking surface.

Claim 21 (original). The data input device as set forth in claim 6 wherein said impedance sensor is an inductance sensor and said tracking surface is comprised of a magnetic material, and wherein said controller is tunable to detect relative movement between the data input device and the tracking surface as a function of an inductance measured by the inductance sensor.

Claim 22 (original). The data input device as set forth in claim 21 further comprising an inductance-capacitance (LC) resonance circuit shaped and sized to connect to said inductance sensor to interact with said magnetic material of said tracking surface.

Claim 23 (original). The data input device as set forth in claim 1 wherein said tracking surface is human skin.

Claim 24 (original). The data input device as set forth in claim 1 wherein said lift-off detection distance is no more than about 4 millimeters (0.16 inch).

Claim 25 (original). The data input device as set forth in claim 24 wherein said lift-off detection distance is no more than about 4 millimeters (0.16 inch) and at least about 0.5 millimeter (0.02 inch).

Claim 26 (original). The data input device as set forth in claim 25 wherein said lift-off detection distance is no more than about 3 millimeters (0.12 inch) and at least about 0.5 millimeter (0.02 inch).

Claim 27 (original). A method comprising:

energizing at least two electrodes, said at least two electrodes being operatively connected to a data input device configured to interact with a tracking surface;

measuring an electrical impedance between said at least two electrodes; and

determining the relative distance between said data input device and said tracking surface as a function of said measured impedance.

Claim 28 (original). The method as set forth in claim 27 further comprising measuring an electrical capacitance between said at least two electrodes.

Claim 29 (currently amended). A data input device comprising:

a resistance sensor arranged with respect to a tracking surface, said resistance sensor having a measurement zone within which said resistance sensor measures an electrical resistance; and

a controller ~~receiving and~~ responsive to the measured resistance of said resistance sensor for determining spatial separation between the tracking surface and the data input device ~~if said data input device is spatially separated from said tracking surface by at least a lift-off detection distance as a function of the measured resistance~~, said controller initiating a non-tracking mode in which said controller suspends tracking of relative movement between said data input device and said tracking surface when said data input device is spatially separated from said tracking surface by at ~~least the~~ least a lift-off detection distance.

Claim 30 (canceled).

Claim 31 (original). The data input device as set forth in claim 29 wherein said resistance sensor further comprises at least two electrodes, said data input device adapted to energize said at least two electrodes with direct current and measure the resistance between said at least two electrodes to determine if said data input device is spatially separated from said tracking surface by at least the lift-off detection distance.

Claim 32 (original). The data input device as set forth in claim 29 wherein said resistance sensor further comprises at least two electrodes, said data input device adapted to energize said at least two electrodes with alternating current and measure the resistance between said at least two electrodes to determine if said data input device is spatially separated from said tracking surface by at least the lift-off detection distance.

Claim 33 (currently amended). The method as set forth in claim 27 further comprising ~~A method of detecting lift-off of a data input device from a tracking surface, said method comprising:~~

~~energizing at least two electrodes, said at least two electrodes being operatively connected to the data input device configured to interact with the tracking surface;~~

~~measuring an electrical impedance between said at least two electrodes; and~~

initiating a non-tracking mode, in which a controller suspends tracking of relative movement between said data input device and said tracking surface, as a function of said ~~measured impedance~~ relative distance when said data input device is spatially separated from said tracking surface by at least a lift-off detection distance.

Claim 34 (currently amended). The method as set forth in claim 33 further comprising initiating a tracking mode, in which the controller tracks relative movement between said data input device and said tracking surface, as a function of said ~~measured impedance~~ relative distance when said data input device is not spatially separated from said tracking surface by at least a lift-off detection distance.

Claim 35 (original). The method as set forth in claim 33 further comprising measuring an electrical capacitance between said at least two electrodes.

Claim 36 (original). The method as set forth in claim 33 further comprising measuring an electrical resistance between said at least two electrodes.